

**ABSTRACT OF DISCLOSURE**

A method of controlling a fusing temperature of an electrophotographic imaging apparatus includes controlling the fusing temperature of a fusing roller which is subject to a delayed response to heating due to a rubber layer formed on a surface of the fusing roller with a predetermined thickness. In the method, after the fusing temperature of the fusing roller has reached a predetermined target fusing temperature, a power corresponding to an offset value or an offset power supply ratio is supplied to a heater for a predetermined power control period or a predetermined offset control period to maintain the fusing temperature of the fusing roller. A thermal loss in the fusing apparatus during a print mode is compensated by existing power control methods, and the fusing temperature of the fusing roller is maintained at the target fusing temperature by periodically supplying a predetermined amount of the power to the heater, so that a quality of an image fused onto a recording medium is improved.